

**December 2005 Update**  
**Marshall Landfill Superfund Site**  
**Boulder County, Colorado**  
**(5-Year Review Date: 9/28/01)**

***Highlights Since the 2001 Review***

- **Additional signs posted around the landfill**
- **Revised O&M Plan completed 2003**
- **Soil cover improvements completed**

**Brief Site History:** Marshall Landfill includes 160 acres in the foothills of the Rocky Mountains, three miles from the City of Boulder. From 1965 until 1974, the site accepted municipal waste, destabilized sewage sludge and many unknown, potentially hazardous wastes. In 1981, a county inspector reported that seeps from leach collection ponds were flowing into Community Ditch, which conveys drinking water to the City of Louisville and irrigation water to eastern ranches. Subsequent studies identified high levels of benzene, trichloroethene (TCE), tetrachloroethene (PCE), barium, iron, manganese and zinc in surface and shallow ground water. The site was listed on the Superfund National Priorities List in 1983 and the parties responsible for clean up are the City of Boulder and Browning-Ferris Industries (now Allied Waste).

**Cleanup Activities Completed:** Construction completion was achieved in August 1993. The following cleanup activities were completed by the Potentially Responsible Parties (PRPs):

- Constructing a groundwater collection and treatment system.
- Regrading and revegetating the landfill soil cover.
- Draining and treating leachate from lagoons.
- Installing a pipeline to convey water from the Community Ditch through the landfill to prevent further contamination of the groundwater.

**Current Status:** Current Operation & Maintenance activities include operating the system, maintaining the landfill cover and groundwater monitoring. In August of 2001, the PRPs submitted a proposal to terminate groundwater treatment. The Five-Year Review noted that additional monitoring activities would be necessary to demonstrate protectiveness after the discontinuation of groundwater treatment.

**Summary of Protectiveness:** The remedy is progressing as expected, and remediation standards for treated effluent discharge for the water treatment plant are consistently met. The remedy as designed, constructed and operated is protective of human health and the environment. The off site migration of contaminated groundwater has been controlled by the successful operation of the groundwater collection and treatment system. Effluent from the water treatment system consistently achieves the remediation standards.

**Issues Impacting Protectiveness:** A few issues that do not immediately impact the protectiveness of the remedy were identified. The following table summarizes the status of the follow-up actions addressing these issues.

**Marshall Landfill Superfund Site  
Five-Year Review Update Table  
Review Date 9/28/01**

<b>Issues</b>	<b>Recommendations/Follow-up Actions</b>	<b>Follow-up Actions (Status/Due Date)</b>	<b>Status of Follow-up Actions 12/05</b>	<b>Responsible Party</b>
1) Soil cover maintenance	Continue active efforts to maintain and improve landfill vegetative cover.	Scheduled for completion by May 2003.	Repairs to correct minor erosion from wind or water completed 6/03.	PRPs
2) Vegetative cover maintenance	Continue active efforts to maintain and improve landfill vegetative cover.	Schedules for completion by May 2003	Vegetative layer continues to improve as reported 5/04.	PRPs
3) Limited signs	Post additional signs around landfill, continue to monitor public access to site.	Completed in December 2002	Completed in December 2002	PRPs
4) Failure to report results for some constituents	Review monitoring plans and correct future request for analyses to include all planned water tests.	Will be addressed in the revised monitoring program implemented by April 2003	Revised Operation and Maintenance (O&M) Plan completed 6/25/03.	PRPs
5) Detection limits in offsite water quality monitoring reports higher than relevant standards	Review remediation standards and relevant water quality standards and implement sample analysis plan that provides quantitative data for comparison to the numeric standards.	Will be addressed in the revised monitoring program implemented by April 2003	Revised O&M Plan completed 6/25/03	PRPs with EPA approval
6) Protectiveness of remediation standards in question	Perform additional surface water sampling and analysis to demonstrate that beneficial uses for Lower Cowdrey drainage and South Boulder Creek are protected; propose point of compliance for monitoring offsite surface water quality.	Will be addressed in the revised monitoring program implemented by April 2003.	Revised O&M Plan completed 6/25/03	PRPs with EPA approval
7) Treatment of constituents in collected groundwater appears unnecessary (except for iron and manganese).	Develop long-term monitoring approach that provides the data needed to track changes in water quality and demonstrate ongoing protectiveness of the remedy after treatment discontinued; propose point of compliance for monitoring offsite groundwater quality.	EPA and the State determined on February 2003 that groundwater collection and treatment will continue at this time based upon most recent influent data	EPA and the State determined on February 2003 that groundwater collection and treatment will continue at this time based upon most recent influent data	PRPs with EPA approval

